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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
VANCHY JR, MICHAEL J

ART UNIT	PAPER NUMBER
2624	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/562,878

Applicant(s)

YOO, WOONG-TUK

Examiner

Michael Vanchy Jr.

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 11/15/2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1, 2, 4 are rejected under 35 U.S.C. 102(e) as being anticipated by Bates et al, 6,930,707 B2.**

Re claim 1, an iris pattern photographing apparatus, comprising: a body case; a short lens digital camera for photographing an iris pattern of a person to be identified, the short lens digital camera being set up in the body case and including a lens module and an imaging device (Abstract); light emitting diode (LED) lamps for providing illumination for photographing, the LED lamps being set up around a lens of the digital camera (col. 4, lines 9-11); a power supplying means for supplying power source to the digital camera and the LED lamps (col. 6, lines 42-44); and a focal lens combined with a lens of the digital camera in the front for close contact photographing (col. 5, lines 63-65).

Re claim 2, the iris pattern photographing apparatus as recited in claim 1, wherein the power source supplying means includes cable for supplying power source through a computer, the cable being connected to any one of input/output ports (Fig. 6, col. 6, lines 11-35); and the digital camera, which is connected to another input/output port of the computer through the cable, compares an iris image transmitted from the camera with a pre-registered iris pattern stored in the computer (col. 2, lines 1-12).

Re claim 4, the iris pattern photographing apparatus as recited in claim 1, further comprising: a storing means for storing the pre-registered iris pattern, the storing means being set up inside the body case; and a processor for comparing the iris image inputted from the digital camera with the iris pattern stored in the storing means, the processor being set up in the inside of the body case (Fig. 6, col. 6, lines 11-42).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. **Claims 3, 11, 12, are rejected under 35 U.S.C. 103(a) as being unpatentable over Bates et al, 6,930,707 B2.**

Re claim 3, the iris pattern photographing apparatus as recited in claim 1, wherein the power source supplying means further includes: a Universal Serial Bus (USB) controller including one or more USB modules, the USB controller being set up in the body case and the computer.

The examiner takes official notice that Bates et al. describes using a computer and multiple different I/Os. It is notoriously well known in the art that a universal serial bus (USB) is a type of I/O used for powering apparatuses. Therefore, at the time of the invention it would be obvious to one of ordinary skill in the art to use a USB device to power the apparatus stated in Bates et al.

Regarding claims 11 and 12, Bates et al. states using multiple-piece elements having movable parts for adjusting the focal length. Also, that a lens having a full range of focal lengths may be used but add unnecessary cost to the camera. The adjustable lens and focal lens encompasses the focal length of 16 to 25 mm, since these lengths can be created by adjustment.

4. Claims 5-7, 15-17, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bates et al, 6,930,707 B2 as applied to claim 1 above, and further in view of Kim et al., 2003/0123711 A1.

Regarding claims 5-7, Bates et al. uses LEDs (Fig. 1A, item "110") but is silent on how they are displayed. However, Kim et al. displays illuminators arranged at different locations (Fig. 5), which encompasses the illuminators being formed within 2 cm from the center of the camera lens. Kim et al. also turns on a plurality of illuminators sequentially which, encompasses sequentially turning them on at an interval of 200 mm/s ([0021] and [0033]). This set up allows to correct the defect in photography caused by incident reflecting light into the inside of the digital camera. Thus, it would be clear to one of ordinary skill in the art at the time of the invention to modify Bates et al. to set up the LEDs in the manner described to correct the defect caused by incident reflecting light into the inside of the camera.

Regarding claims 15-17, Bates et al. teaches using different adjustable focal lengths, but is silent on using an "external illumination blocking device" or the cylinder that comes out of digital cameras when a zoom function is used. However, Kim et al. uses a zoom-in and zoom-out function that is controlled by a control device (Fig. 1, item "105"). The examiner takes into account that it is notoriously well known in the art that

when a lens of a camera zooms out that the cylinder is encompassed not allowing any light to penetrate from the sides (illumination blocking device), which would ruin the image if allowed. The examiner also takes into account that the zoom is used to change the focal length, so that the image being taken is in focus, and that having a focus using a distance measurement value ([0008]) allows the camera to zoom in or out to the distance required. This encompasses the 5 to 10 cm claimed by the applicant. It would be clear to one of ordinary skill in the art at the time of the invention to modify Bates et al., to include a controlled zooming function that has an "external illumination blocking device" for increased precision of the image taken.

Regarding claim 21, Bates et al. uses LEDs but is silent on using an external illumination blocking device and a switch to turn off power. Kim et al., describes a controller (Fig. 2, item "203") for turning on and off the illuminators ([0010]) and a zoom (external illumination blocking device) but is silent on disabling the switch based on the movement of the external illumination blocking device. The examiner takes into account that it would be clear to one of ordinary skill in the art at the time of the invention to incorporate disabling the switch based on the zoom and that this practice is notoriously well known in the art. Therefore, taking the combined teachings of Bates et al. and Kim et al. as a whole it would be clear to one with ordinary skill in the art at the time of the invention to incorporate an off switch that can be disabled, thus saving power.

5. Claims 8-10, 13, 14, and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bates et al, 6,930,707 B2 as applied to claim 1 above, and further in view of Cambier et al., 6,532,298 B1.

Regarding claim 8, Bates et al., uses LEDs but is silent on them being infrared and using a cold mirror. However, Cambier et al. uses a cold mirror which reflects visible light with wavelengths about 400 to 700 nanometers, and passes light having longer wavelength in the range of about 700 to 900 nanometers (within infrared wavelength range) (col. 4, lines 13-21). It is clear to one of ordinary skill in the art at the

time of the invention to modify Bates et al. to use infrared LEDs and a cold mirror, to increase the accuracy of the image of the eye being taken, because the user can make sure that the entire eye is being imaged.

Regarding claim 9, the examiner takes into account that the wavelengths allowed to penetrate in Cambier et al. is about 700 to 900 nanometers (col. 4, lines 13-21). Thus, the wavelengths allowed to pass can be between 800 to 900 nanometers as proposed by the applicant.

Regarding claim 10, Cambier et al. discusses reflecting light by the cold mirror, thereby forming a magnified virtual image of the eye. The radius of curvature of the mirror is selected so that the magnified image of the eye fills the user's entire field of view (col. 5, lines 27-40) and (col. 5, lines 8-13).

Regarding claim 13, Cambier et al. states using an auto-focus lens system, the results of the focus assessment control lens system (controller) thereby automatically adjusting the focus (focal length) to produce an optimal image (col. 12, lines 30-34).

Regarding claim 14, Cambier et al. states using an auto-focus lens system (axial direction), the results of the focus assessment control lens system (controller w/connection parts) thereby automatically adjusting the focus (focal length) to produce an optimal image (col. 12, lines 30-34) and (col. 10, lines 35-44).

Regarding claim 18, combining Bates et al. with Cambier et al. the LEDs stated in Bates et al. (Fig. 1A, item "110") are the primary light sources, and the auxillary light source is the one used in Cambier et al. (Fig. 4, item "130"). It would be clear to one of ordinary skill in the art at the time of the invention to include an auxiliary light source for increased accuracy in maintaining the size of the pupil.

Regarding claim 19, Cambier et al., uses indicators, preferably an LED, which lights up when an acceptable image has been captured (Fig. 5, items "305, 306, and 307," col. 7, lines 2-8).

Regarding claim 20, Cambier et al., uses an iris acquisition means (Fig. 4, item "105") which can be a charged coupled device (CCD) or a complementary metal oxide semiconductor (CMOS) device (col. 3 line 66 to col. 4 line 2).

Examiner's Note

The referenced citations made in the rejection(s) above are intended to exemplify areas in the prior art document(s) in which the examiner believed are the most relevant to the claimed subject matter. However, it is incumbent upon the applicant to analyze the prior art document(s) in its/their entirety since other areas of the document(s) may be relied upon at a later time to substantiate examiner's rationale of record. A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). However, "the prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed...." In re Fulton, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Vanchy Jr. whose telephone number is (571) 270-1193. The examiner can normally be reached on Monday - Friday 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samir Ahmed can be reached on (571) 272-7413. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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